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10/576,522	04/19/2006	Nancy Auestad	7278USo1	3621

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Abbott Laboratories  
Patent and trademark Department Dept. 377 -AP6A-1  
100 Abbott Park Road  
Abbott Park, IL 60064

EXAMINER
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EBRAHIM, NABILA G

ART UNIT	PAPER NUMBER
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1618

MAIL DATE	DELIVERY MODE
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03/31/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,522	<b>Applicant(s)</b> AUESTAD ET AL.	
	<b>Examiner</b> Nabila G. Ebrahim	<b>Art Unit</b> 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

Receipt of the Applicant remarks and amendments to the claims is acknowledged.

#### ***Claim Rejections - 35 USC § 112***

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While the disclosure supports identifying the results after using the formula, there is no support for identifying, evaluating or measuring the need of an infant to increase lean body mass and reduce fat body mass. In accordance with MPEP 714.02 applicants should specifically point out support for the generic concept of claim 1 using the expression "identifying a need to increase lean body mass and reduce fat body mass in the infant"

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. In view of Applicant arguments and explanation, the rejection of claim 1 under 35 U.S.C. 112, second paragraph is hereby withdrawn.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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**In general, the new amendments to the claims would not exclude the rejection under 35**

**USC § 102 because** the step of identifying the need of an infant is a result of routine examination of an infant or a new born which is a periodic routine follow up known in the art. In addition, even if the infant is not followed up by a practitioner, it is noted that if the parents of the infants would notice an abnormal observation in their baby's growth, they would seek help from a person having ordinary skill in the art who in turn would evaluate the infant and identify this need then prescribe such type of formula.

1. Claim 1-14 remain rejected under 35 U.S.C. 102(b) as being anticipated by Oconnor et al. US publication 20020045660 (Oconnor).

Oconnor teaches improved nutritional composition containing specified amounts of DHA and AA as well as their precursor essential fatty acids alpha-linolenic and linoleum acids. The methods involve feeding LCP supplemented, nutrient-enriched formulas for an extended feeding regimen, typically until at least 3 months corrected age (CA), preferably to 6 or even 12 months CA. The neurological developments such as visual development, and motor development were enhanced without findings of anthropometric growth faltering or inhibition. (abstract). Note that the lean body mass is mainly muscles and the motor development depends on muscles' mass.

Oconnor teaches also that infant formula is intended for full-term infants [0088], and recommends using enriched formula comprising DHA and AA for pre-term infants (abstract). Oconnor's formula contains the same amounts recited in the instant claims such as about 2-65 mg/kg body wt. of DHA and preferred 3-20 mg/kg body wt. and an amount of AA of 5-65 mg/kg body wt. preferred 5-40 mg/kg body wt. the formula is intended for infants of less than one year corrected age. (See table "C"). Oconnor discloses the values of caloric densities in different units; however, it is expected to be the same since the reference discloses the same compounds in the same amounts. Also instant claims 8, and 9 recite the amount of grams per

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each 100kcal of the formula which is also inherent since the reference discloses same amounts and percentages of kcal's. The protein, fat and carbohydrate components provide, respectively, from about 8 to 10, 46 to 50 and 41 to 44% of the calories; and the caloric density ranges narrowly from about 660 to about 700 kcal/L [0088]. Regarding claims 12-14 that recite amount of DHA and AA as a percentage of the total fatty acids in the formula, Oconnor describes similar percentages [0088].

Oconnor discloses a formula comprising the same fatty acids for improving the neurological and motor development, though the reference does not disclose literally the effect of a formula comprising DHA and AA on the growth of lean mass or the reduction of fat mass, it is noted that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable.

Conclusion: claims 1-14 are anticipated by Oconnor.

### ***Response to Arguments***

Applicant's arguments filed 10/09/2008 have been fully considered but they are not persuasive.

- Applicant argues that O'Connor fail to disclose or suggest identifying a need to increase lean body mass and reduce fat body mass in the infant, as required by amended claim.

**This was not found persuasive because** identifying the need of an infant to any special formula is an inherited step since no parents can change infant's formula to a special kind of formula like the instant subject matter without an advice from a person skilled in the art who would not take the decision unless the infant is evaluated.

O'Connor, et al. state that the ARA and DHA supplemented formulas described therein may improve or enhance neurological development, such as visual, motor, and language

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development, but do not disclose or suggest that such formulas have any effect on body composition, such as increasing lean body mass and reducing fat body mass. This was not found persuasive because, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). In the instant case using the same composition (formula) to the same population should inherently produce the same results even if the reference does not literally disclose it.

**Note that in the instant case the instant subject matter which is concerned with increasing lean body mass and reducing body fat cannot exclude the improvement in neurological concerns disclosed by O'Connor.**

- With regard to new claim 16, O'Connor, et al. fail to disclose or suggest evaluating the body composition of an infant after feeding the infant the formulas disclosed therein. Claim 16 is thus patentable over O'Connor, et al. for this additional reason. This was not found persuasive because all infants' growth is always evaluated periodically and all people of ordinary skill in the art would understand different situations when an infant should need further evaluation.

Claims 1, 5 and 11 remain rejected under 35 U.S.C. 102(b) as being anticipated by Berthold Koletzko, Fatty Acids And Early Human Growth, American Journal of Clinical Nutrition, Vol. 73, No. 4, 671-672, April 2001 (Koletzko).

Koletzko teaches that pre- and post-natal essential fatty acid supply and metabolism are related to infant growth. The provision of infant formulas with a balanced supply of dietary AA and DHA in reasonable amounts and with adequate antioxidant protection, which is recommended by many experts worldwide, did not lead to poor growth or other adverse effects

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in several randomized clinical trials (see page 672, left column). Koletzko teaches the use of AA and DHA in reasonable amounts to full-term infants because it is correlated to weight growth. Koletzko teaches the use of DHA and ARA in full-term infant feeding without adverse effects, the instant claims recited a method of using same compounds, the method comprises one step of feeding an infant a nutritional formula comprising DHA and ARA to increase lean body mass and reduce fat body mass in infants. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

Conclusion: Claims 1, 5, and 11 are anticipated by Koletzko.

### ***Response to Arguments***

Applicant's arguments filed 10/09/2008 have been fully considered but they are not persuasive.

- Applicant argues that Koletzko fails to disclose or suggest identifying a need to increase lean body mass and reduce fat body mass in an infant, as required by amended claim 1 nor does Koletzko recognize or suggest that formulas comprising ARA and DHA have any affect on body mass, much less increase lean body mass and reduce fat body mass. Rather, as noted above, Koletzko merely states that infant formulas with a balanced supply of dietary ARA and DHA did not lead to poor growth or other adverse effects in several randomized clinical studies.

**This was not found persuasive because** administering the same formula to the same population should produce the same results. Even if Koletzko did not disclose literally these results, the reference clearly teaches that the formula enhances healthy growth. With regard to the amendments to instant claim 1, it is noted that infants are not administered special formulas unless evaluated by a person skilled in the art.

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1. Claims 1, 5, and 10 remain rejected under 35 U.S.C. 102(b) as being anticipated by Innis SM. et al., Docosaheaxaenoic acid and arachidonic acid enhance growth with no adverse effects in pre-term infants fed formula, J Pediatr. 2002 May;140(5):547-54 (Innis).

Innis teaches that Feeding DHA+ARA from single-cell triglycerides enhance weight gain in formula-fed premature infants with no evidence of adverse effects. Claim 1 recites that “DHA and ARA reduces fat body mass”, consequently, it is inherent that these compounds will have the same effect on infants who are fed formulas comprising DHA and ARA. Innis teaches the use of DHA and ARA in infant feeding to enhance growth, the instant claims recite a method of using same compounds, the method comprises a customary step of identifying the need of an infant and another step of feeding an infant a nutritional formula comprising DHA and ARA to increase lean body mass and reduce fat body mass in infants. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

Conclusion: claims 1, 5, and 10 are anticipated by Innis.

### ***Response to Arguments***

- Innis, et al. fail to disclose or suggest identifying a need to increase lean body mass and reduce fat body mass in an infant, as required by amended claim 1. Nor do Innis, et al. recognize or suggest that formulas comprising ARA and DHA have any affect on body mass, much less increase lean body mass and reduce fat body mass. Rather, as noted above, Innis, et al. merely evaluated the effects of ARA and DHA supplemented formulas on the growth or visual acuity of formula- fed premature infants.

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**This was not found persuasive because** administering the same formula to the same population should produce the same results. Even if Koletzko did not disclose literally these results, the reference clearly teaches that the formula enhances healthy growth. With regard to the amendments to instant claim 1, it is noted that infants are not administered special formulas unless evaluated by a person skilled in the art.

**In general, it is noted that the instant method is about administering ADA+DHA to an infant in need of the formulation which is the same method used by O'Connor, Koletzko and Innis. Any result gained by the method is an inherited effect of the combination of the two compounds.**

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Innis SM. et al., Docosahexaenoic acid and arachidonic acid enhance growth with no adverse effects in pre-term infants fed formula, J Pediatr. 2002 May;140(5):547-54 in view of Koletzko B. et al.,

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Physiological Aspects of Human Milk Lipids, Early Hum Dev. 2001 Nov;65 Suppl:S3-S18 and further in view of Oconnor et al. US publication 20020045660.

**The new amendments to the claims would not exclude the rejection under 35 USC § 103**

**because** the step of identifying the need of an infant is a result of routine examination of an infant or a new born which is a periodic routine follow up known in the art. In addition, even if the infant is not followed up by a practitioner, it is noted that if the parents of the infants would notice an abnormal observation in their baby's growth, they would seek help from a person having ordinary skill in the art who in turn would evaluate the infant and identify this need then prescribe such type of formula.

Innis teaches that Feeding DHA+ARA from single-cell triglycerides enhances weight gain in formula-fed premature infants with no evidence of adverse effects. Claim 1 recites that "DHA and ARA reduces fat body mass", consequently, taking into consideration that increasing fat body mass is an adverse effect; it would have been obvious to one of ordinary skill in the art to use DHA and ARA in a baby formula to enhance weight gain while reducing the expected growth fat rate.

Innis does not teach explicitly that DHA +ARA decreases the rate of fat increase in growing infants.

Koletzko teaches that human milk from healthy and well-nourished mothers is the preferred form of feeding for all healthy newborn infants and that the essential fatty acids linoleic and alpha-linolenic acids (LA and ALA) are precursors of long-chain polyunsaturated fatty acids (LC-PUFA), including arachidonic (20:4n-6) and docosahexaenoic (22:6n-3) acids (AA and DHA). The supply of preformed LC-PUFA with human milk lipids has been related to functional outcomes of the recipient infants such as visual acuity and development of cognitive functions during the first year of life. Recent stable isotope studies indicate that the major portion of milk PUFA is not derived directly from the maternal diet, but stems from endogenous body stores.

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Thus, not only the woman's current but also her long-term dietary intake is of marked relevance for milk fat composition.

Neither of the references disclosed the amounts and percentages of DHA, AA, protein, lipid, carbohydrate, and caloric densities.

Oconnor, as explained hereinabove discloses the same amounts and ranges of the ingredients and caloric densities recited in the instant claims.

Accordingly, it would have been obvious to one of ordinary skill in the art to recognize that human milk is the preferred form of feeding for the growth of all healthy newborn infants, the skilled artisan would be motivated to use the essential fatty acids DHA and ARA as disclosed by Innis for infants because it will affect their growth in the same manner expected by human milk. It would also be obvious to one of ordinary skill in the art to follow the amounts of lipids, proteins, carbohydrates and caloric densities disclosed by Oconnor because the reference teaches that the formula invented improves growth, and development of both pre-term and full-term infants. The expected results would be an improved method of suing DHA and AA in advancing infants' growth of muscles without extra growth in fat and also in developing motor skills of infants which reads on increasing lean body mass.

### ***Response to Arguments***

Applicant's arguments filed 10/09/2008 have been fully considered but they are not persuasive.

- Koletzko, et al. fail to disclose or suggest identifying a need to increase lean body mass and reduce fat body mass in an infant, as required by amended claim 1.

This was not found persuasive because identifying the need of an infant to any special formula is an inherited step since no parents can change infant's formula to a special kind of formula like the instant subject matter without an advice from a person skilled in the art who would not take the decision unless the infant is evaluated.

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- Koletzko, et al. does not recognize or suggest that formulas comprising ARA and DHA have any affect on body mass, much less increase lean body mass and reduce fat body mass. Rather, as noted above, Koletzko, et al. generally discuss the physiological aspects of human milk lipids, and note that enrichment of infant formulas with LC-PUFA approximating the typical levels of human milk lipids has been considered to improve substrate supply to formula-fed babies.

**This was not found persuasive because** administering the same formula to the same population should produce the same results. Even if Koletzko did not disclose literally these results, the reference clearly teaches that the formula enhances healthy growth. With regard to the amendments to instant claim 1, it is noted that infants are not administered special formulas unless evaluated by a person skilled in the art.

- Applicants note that none of the cited references disclose or suggest identifying a need to increase lean body mass and reduce fat body mass in an infant, as required by amended claim 1. Although the Innis, et al. and O'Connor, et al. references discuss the effects of ARA and DHA supplemented formulas, neither of these references, nor Koletzko, et al. disclose or suggest that infant formulas including both ARA and DHA have any effect on body composition, much less increase lean body mass and reduce fat body mass.

**This was not found persuasive because** people of ordinary skill in the art and even the public know that increasing lean body mass and reducing fat body mass is the healthiest growth in all ages. In addition, Koletzko for example teaches the use of AA and DHA in reasonable amounts to full-term infants because it is **correlated to weight growth**. The reference also discloses that it was reported that there was an **inverse relation of total *trans* fatty acids to concentrations of various essential fatty acids in plasma lipids of both mothers and infants**. Thus, since it is reported that the combination of ADA and DHa reduces plasma content of fat and

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consequently the fat that reaches the cells. In the mean time it correlates to weight growth, then it is expected that this growth is achieved in protein content of the cells (mainly muscular tissue).

- Applicant argues that there is no motivation to modify the method of O'Connor, or Innis, to include the step of identifying a need to increase lean body mass and reduce fat body mass in an infant.

**This was not found persuasive because** the step of identifying the need of an infant is a result of routine examination of an infant or a new born which is a periodic routine known in the art. In addition, even if the infant is not followed up by a practitioner, it is noted that the parents would notice an abnormal observation in their baby's growth to seek help from a person having ordinary skill in the art who in turn would prescribe such type of formula.

### ***Conclusion***

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nabila G. Ebrahim whose telephone number is 571-272-8151. The examiner can normally be reached on 8:00AM-5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Hartley can be reached on 571-272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nabila G Ebrahim/  
Examiner, Art Unit 1618

/Michael G. Hartley/  
Supervisory Patent Examiner, Art Unit  
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